

# The Ballarat Naturalist

May 2007



Trailing Goodenia  
*Goodenia lanata*  
(Club Logo)

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## MUSK DUCKS (*BIZIURA LOBATA*) BY PATRICK JEAN GUAY

Patrick Jean-Guay was welcomed back to address the April meeting on his Ph.D. work on Musk Ducks. His research was conducted on the population of musk ducks on Lake Wendouree which was about 60 birds at the time and also on populations on the Western Treatment Plant (Werribee), Kangaroo Island - South Australia and Western Australia. The Wendouree birds were comparatively tame with one bird he named Marvin at one stage tugging at his shorts to be noticed and fed.

The status of musk ducks is declining, being described as vulnerable in Victoria, rare in South Australia and stable in Tasmania. This decline was thought to be related to the spread of carp as the musk duck is a visual predator as indicated by its eyes being towards the front and looking forward.

The musk duck shows considerable difference in size between males and females with males being about 2.5 kg compared with a typical weight of 1.5 kg for females. The ducks are only one of two bird species that have pheromones with the males giving off a distinct musky smell in the breeding season that can easily be smelt at a distance of three feet.

With musk ducks, all males display at a similar time and females choose which one to mate with. The male has nothing further to do with incubation or raising of young. The male mating display behaviour was described as having three phases, an initial phase referred to as a “paddle kick” in which water is flicked back whilst the bird moves forward, a second stage identified as a “plonk kick”, where water is flicked sideways whilst almost stationary and a final stage where the tail is arched forward, head raised to show the lobe whilst giving its whistling call. Lobe size was found to be proportional to bird mass. The display was demonstrated with a movie that clearly showed each of the stages. Patrick’s research showed that two of the seven males on Lake Wendouree sired all the young and these were the ones with the bigger lobes. Lobe size was shown to develop as birds aged with a photograph of the same bird at one and three years showing the development.

Patrick’s research compared genetic differences between the subspecies in eastern states and Western Australia. A complicated looking genetic chart showed there was lots of overlap in the populations in the east with four significant genetic dif-

ferences from the Western Australian birds indicating that there is no movement across the Nullarbor and that these populations have been separated for some time. The distribution map shown indicated the eastern population extended across the south east of Australia from about Brisbane to Ceduna including Tasmania while the western population is continuous around the coast of Western Australia up to about Broome.

Breeding investigation on Lake Wendouree showed that two males were sires and five were non sires. The males that were sires were heavier and had larger lobes. Lobes were discovered to be an indicator of size and thought to be observed for this purpose by both sexes, by females in selecting partners and males in avoiding aggression.

Populations on two areas of the Western Treatment Plant were investigated with monthly counts and observation of activity over a 12 month period. Numbers were lowest in spring indicating the area is used as a refuge at non breeding times. Percentage of time diving, preening, loafing, sleeping, swimming and displaying was observed. Compared with Kangaroo Island populations those on the Western Treatment Plant spent less time diving possibly indicating the availability of food.

Another aspect of Patrick's studies was a consideration of a potential problem with captive breeding. The premise was that domestication creates environmental impoverishment and consequently results in reduced brain size. Photos showing domesticated and wild pigs, dogs, cats, ducks, geese, pigeons and turkeys were used to provide an image of relative head and brain sizes. Brain sizes were measured for 645 specimens covering 45 waterfowl species, mostly museum specimens with the leg size used as an independent indicator of bird size. A graph was displayed showing the line of best fit through the points confirming the premise and consequently giving one indication of why there are losses on release.

Patrick thanked John and Carol for their assistance with his field work in Ballarat.

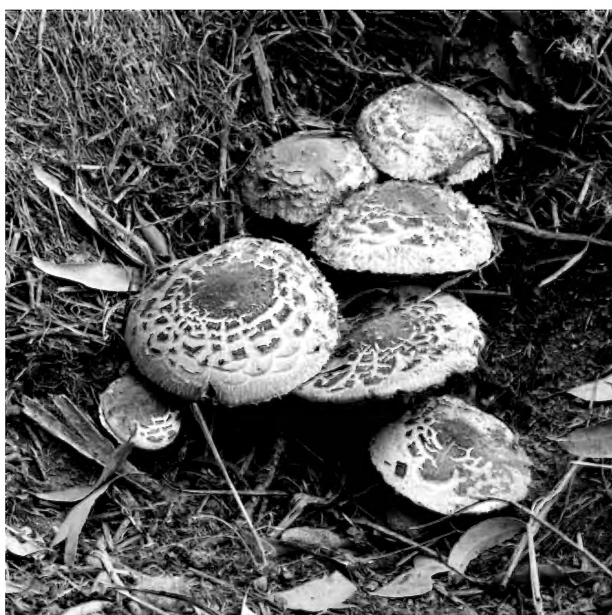
Patrick has spoken to the club before on birds of Canada and it was good to have him return and tell us about his research. We were privileged to hear this advanced summary of his findings and to gain some understanding of musk duck behaviour and status based on research. Considering the status of these birds we are fortunate that they are readily seen on Lake Wendouree and it is hoped that Patrick's research will help ensure this continues. The club wishes him well with the completion of his thesis and future.

Peter Dalman

## EXCURSION TO HARDIES HILL & MONMOUTH MINE

LEADER: JOHN GREGURKE

A mild, dry overcast day saw 13 members begin the day's activities at the Hardies Hill Water Reserve, a 3.87 ha precinct. The higher areas are characterised by Narrowleaf Peppermint, Yarra Gums and Blackwoods with occasional huge knobbly, gnarled Candlebarks providing lots of hollows. The lower areas which would normally provide wetland habitat with Spiny Rush were dry with the appearance of salting. The remains of a small reservoir, its bank collapsing, were covered in grass, remarkably green under the conditions. A deeply eroded gully led away – perhaps deepened by the deluges we experienced in January. Milky Beautyheads *Calocephalus lacteus* were found, and greenhood orchid leaves were peeping through the brown, crackling leaf litter. Tiny patches of *Viola hedereaceae*, the Ivy-leafed Violet appeared, whilst gorse seedlings seemed to thrive. Large thickets of gorse had been sprayed but repeated work will be necessary to prevent re-growth. Shaggy Parasol fungus *Macrolepiota rachodes* was found on a pile of spoil.



Shaggy Parasol Fungus

A flight of Yellow-tailed Black Cockatoos was heard and seen, plus Superb Fairy Wrens and Brown Thornbills, but the day's bird count was to prove disappointing – until the final stop!

Driving on, we stopped at the junction of Treloars Road amongst a stand of Messmate Stringybarks where we saw the first Heath *Epacris impressa* for the day – a white straggly spike. Other ground covers included Small Grass Tree *Xanthorrhoea minor*, a bush-pea *Pultanaea gunnii* and Spiny-headed Mat-rush *Lomandra longifolia*. Small sproutings of Hovea, Dianella and Bracken and Pink

Heath appeared. Most surprisingly, Tiny Greenhoods *Pterostylis parviflora* were found poking up through the compacted spoil derived from a recently enlarged fire dam. What amazing strength plants have!

We passed a Blue Gum plantation being harvested along Grubbed Road, then turned off at the Enfield Service Basin to have lunch by a deep dredge hole. Exploring this area later, we found several spikes of deep red *E. impressa*, Prickly Moses and Messmate Stringybark with seedlings appearing through the

gravel. Carpets of *Grevillea bedgoodiana* contrasted with large areas of bare ochre-coloured ground, with Hedge Wattle *Acacia paradoxa*, Drooping Cassinia *Cassinia arcuata*, one of the Bitter-peas, and Silver Banksia *Banksia marginata* with flowers. A single bloom of Button Everlasting *Helichrysum scorpioides* stood proud above the parched ground. Further away from the road an old mining dam, clearly dry for a long time, was noticed.

The Monmouth Mine area was drab and dry, such a contrast since our last visit (remembered chiefly for the pair of Powerful Owls in a huge cypress). No carpets of orchids and certainly no *Chiloglottis trapeziformis x pescottiana* which had had the entire group on its knees trying to determine just what this bird orchid was. However today there was a lot of Dianella; we saw Common Wedge-pea *Gompholobium huegelii* and Honeypots *Acrotriche serrulata*. More interesting was a clump of gorse infected with Gorse Spider Mite, recognised by the filmy tent of threads enclosing spikes at the end of branches, with clusters of minute brown mites; further along was the web of a Golden Orb Spider anchored in a triangular fashion between three saplings. The owner was nowhere to be seen. Old shafts, an old dam, and the remains of concrete foundations for mining equipment drew our attention. The lack of ground cover resulting from the last few years of below average rainfall has made it easier to find the mining relics but equally it is much easier to see garbage dumped in the bush!

After some well-coordinated teamwork to change the McDonnell's flat tyre we arrived at Franklin's Bridge on the Yarrowee River, where the best bird sighting for the day occurred – a pair of Wedge-tailed Eagles which flew within very good viewing distance. Here on the Yarrowee the Napoleons-Enfield Landcare Group with LINCOS are removing willows – this had been happening in the past few days - and re-vegetation with Casuarinas, Wattles and Gums had already begun. Entitled the “Yarrowee Corridor Rehabilitation Project”, the scheme covers that section of the river between Ballarat and Inverleigh and will involve fencing to exclude stock, the re-establishment of riparian vegetation, weed and vermin control, and erosion control; future plans suggest there will be an access track, carpark, picnic area and wetland.

Weeds we noticed near the bridge included Blackberry, wild mustard and hemlock. However it was pleasing to see a Bronzewing Pigeon flushed from the wattles whose seed it likes; a Grey Shrike-thrush and a pair of Masked Lapwings made themselves known.

Despite the dryness of the countryside there was still plenty to interest us, including the contrast provided by the changed weather conditions. Thanks to John and Elaine for preparing the day's route so that we re-visited localities not seen for quite a while.

Carol Hall.

## **IN SEARCH OF THE ELUSIVE PLATYPUS.**

Australia has many unique mammals, but surely the most intriguing group must be the monotremes, the egg-laying mammals. These are represented by only three species, two echidnas and the platypus. Of these, the most extraordinary must be the platypus, with its amazingly stream-lined shape, thick waterproof fur, and rubbery duck-beak shaped bill. When the first specimen arrived in Britain, it was thought to be a hoax! Nobody believed that such a bizarre mix of features could have occurred naturally, but that a taxidermist must have cunningly sewn together parts of other animals!

Some time ago, John and I visited Healesville Sanctuary, where, amongst many other interesting exhibits, we were able to observe several platypus in a specially constructed aquarium. The lighting there is very subdued to mimic the conditions platypus prefer, and it was a wonderful sight to see the creatures going about their normal business, swimming swiftly with their powerful webbed feet, searching for food items amongst the stones with their sensitive bills. Their fur was shrouded in a thin film of air, making them look like small, athletic, silver torpedoes!

We spent some time watching these captivating creatures, and listening to the guide describing the platypus' main features and habits. We were very interested to find they are still regarded as common in east and south-east Australia, although they are dependent on clean fresh water habitats which are undisturbed.

When we came across a pamphlet advertising 'Paddle with the Platypus' a few days after our Healesville visit, we decided it was definitely a trip we had to do! Fortunately, John and Kay Morrish were equally interested, so we arranged to go down with them to Forrest, in the Otways, for a weekend in February.

We met up with Bruce, our guide, and two other would-be platypus hunters, in the small town of Forrest at 6pm. After a short drive into the forest, Bruce led us on a twenty-minute walk through a ferny path to the shore of Lake Elizabeth, where we soon put on our life-jackets, and embarked on our craft, two sturdy Canadian style canoes, lashed together into a sort of catamaran!

Lake Elizabeth was formed just over fifty years ago, when a landslip effectively dammed the river. The river still runs through the lake, keeping the water fresh and clean, and providing the sort of habitat which platypus prefer. It had been a very hot afternoon, and it was really beautiful to find this tranquil piece of water, shaded by the high forested slopes all around, as the sun began to go down. Bruce expertly plied the paddle, and quietly and gently we drifted between the tree skeletons and submerged tree-ferns, with the sound of birds and insects all around us. We enjoyed watching the cormorants roosting, and seeing a group of king parrots fly between the trees, and were amazed by the enormous number of dragon- and damselflies.

We were all very happy to quietly drift in this relaxing fashion, looking out for any sign of movement in the water near certain parts of the banks, which Bruce told us were the platypus' favourite haunts. There are six platypus resident in the lake, including one young one, probably only a few weeks old. Older animals can stay under water for a minute or more, whereas young animals can probably only manage a few seconds. An hour went past, and we were beginning to wonder whether

we were going to be unlucky! But, as the sun finally slipped behind the trees, and the water surface was no longer directly illuminated, our first platypus appeared, arrowing along the water surface for a few metres, before quickly flipping over into a silvery dive. It was a thrilling moment for us all!

We continued with our search for another hour or more, and were rewarded with two more sightings. Bruce was an excellent guide, giving us plenty of information, but never dominating the tranquillity of such a wonderful place. He also offered us all a cup of tea or coffee, and fruit cake, which was an unexpected pleasure!

When the sun had finally disappeared completely, we paddled back to the jetty in the gathering darkness, and then began to tackle the walk through the forest back to our cars. Bruce illuminated the path with his torch, but it was hardly necessary! It was a perfect night, looking up through the trees to a myriad of stars, and then finding the sky echoed at our feet: thousands of glow-worms lighting our path ! For John and me it was like fairyland!

We all agreed that it had been a wonderful way to spend an evening. Platypus sightings are almost guaranteed, but even without them, it was a superb, relaxing experience; a feeling of real communication with the natural world, an experience not to be missed.

'Paddle with the Platypus' guided canoe tours can be booked on 03-5236-6345

Alison Williams February 2007

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- Greg Binns: 60 yr old photo of Musk Duck Nest on Ouyen water supply.
  - Lyndsay Fink: Cross section of Sandalwood trunk. Growth rings were close together showing slow growth in dry climate.
  - Zelda Martin: Graph showing Ballarat rainfall for past 150 years.

### **Field Reports**

- Greg Binns: Four Spine-tailed Swifts flying low over Ballarat on a cloudy day. Musk Lorikeets bathing by tumbling in damp leaves of Contorted Willow and Poplar trees in early morning.
- John Gregurke: Male Flame Robin at Pauls Wetland (46<sup>th</sup> species at Wetland).
- Nina Netherway: Wallaby at Pauls Wetland.
- John Mildren: At Mt Helen. Echidnas searching for ants on 3 occasions. Frequent visits from large male Eastern Grey Kangaroo. Flock of 35 White-winged Choughs and male Golden Whistler.
- Adrienne Schreuder: Sightings of wallaby, Eastern Grey Kangaroo, Koala, Echidna and Yellow-rumped Thornbill at Mt Helen.



## **FNC BALLARAT MINUTES OF GENERAL MEETING 13TH APRIL 2007**

The President welcomed 29 members & visitors.

### **Correspondence.**

#### **IN:**

- Peninsula FNC: Spring Camp, 5-7 October 2007, at The Briars, Mt Martha
- Frank Harrap: Retiring after 30 years of membership including 6 years as President
- Tony Johns: Apology/Janet Dale: Membership
- Victorian National Parks Association: Appeal
- Melbourne Aquarium: Information
- Glenelg Hopkins CMA: Wildlife Guide for Landholders.
- Enfield Forest Alliance: Newsletter; Membership renewal.

#### **OUT**

- FNCV: Additional material re Ern Perkins nomination for ANH Medallion
- City of Ballarat: Lake Wendouree Rowing Course Deepening submission.

### **Business Arising from correspondence**

That renewal of membership for Enfield Forest Alliance and the annual subscription of \$10 be paid. Moved: Claire Dalman, Seconded: Helen Burgess Carried.

That a letter be written to Frank Harrap accepting his resignation with regret and thanking him for his involvement in Field Naturalists Club of Ballarat including his time on the committee, serving as president for six terms and leading many excursions.

### **Reports**

*Treasurer's Report:* Opening Balance \$3915.67; Receipts \$83.00; Expenses \$117.60; Closing Balance \$3881.07

*Dereel Lagoon meeting:* Carol Hall and Greg Binns attended. Grant has been received. Planning is underway and working bees will be held later.

*Lake Burrumbeet Advisory Committee:* Attended by John Gregurke. Working bee to plant trees on Sunday 20 May if it has rained by then.

*Committee Meeting:* Peter Dalman Reported on the main points of the committee meeting.

### **General Business**

1. Syllabus Card for 2007-2008 available for members. Peter Dalman thanked Carol Hall for preparing the syllabus card.
2. Carol Hall volunteered to write the excursion report on Sunday.
3. Members were reminded of the Club camp at **Star of the Sea Convent, Apollo Bay, 25-27 May**. List circulated for members to indicate intention to attend.
4. Newsletters from sister Field Naturalist's Clubs were available for borrowing.
5. Claire Dalman sought information about David Fleay who was born in Ballarat 100 years ago. Greg Binns will ask Fleay relatives.
6. Creswick Seminar: Marie Keatley "Shifts in flowering dates of Australian plants related to climate" Friday 20 April.
7. Uni. of Ballarat: Dr. Graeme Coulson "Exploding Kangaroos!" Fri 27 April.
8. Uni. of Ballarat: Maintaining biodiversity in modified landscapes Fri 15 June.

### **Show and Tell**

## CALENDAR

### May

- Fri 4            Rolf Schlagloth—Liason Officer, Australian Koala Foundation  
*A Vision for the Future—Koala Management in Ballarat.*
- Sun 6            Mt Beckworth - Club Members
- Tues 22          Committee meeting 7.30pm at John Gregurke's,  
1 John St, Wendouree
- 25-27           **Club Camp**—Star of the Sea Convent, Apollo Bay

### June

- Fri 1            Chris Baulch—Club Member *Carl Linnaeus—300 years*
- Sun 3            Basalt and Deep Spring—Greg Binns OAM

### Have you made your booking for the Club Camp at Star of the Sea Convent in Apollo Bay — May 25—27?

***You need to bring:*** food for Fri night to Sunday lunch including picnic lunches  
& thermos; bed linen & towels; small pots & pans for cooking.; games/drinks;  
reference books for temperate forests, seashores, fungi etc,  
***Convent provides:*** elec. Blankets, some blankets, handbasins in room, shared  
bathroom, microwave, 'fridges

### Committee

President.....Mr Peter Dalman  
Vice-President.....Mr Greg Binns  
Secretary.....Mr John Gregurke  
Treasurer .....Mr Les Hanrahan

Miss Helen Burgess .....	Mrs Claire Dalman.....
Mrs Carol Hall .....	Mrs Val Hocking .....
Mr John Morrish .....	Ms Nina Netherway (editor) .....

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**Meetings** are held at Ballarat Horticultural Centre, cnr. Gregory & Gillies Sts (VicRoads 254 F8) on the first Friday of the month at 7.30pm.

**Excursions:** Depart from Ballarat Market Place (formerly Creswick Plaza) Creswick Rd., Ballarat (VicRoads 255 M10) at 9.30am unless otherwise specified.

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